Tribal Wild Salmon Stock Recovery Efforts

Introduction

The past two decades have witnessed a steady decline of many wild salmon stocks originating from Puget Sound and the Washington coast. A huge population influx in Washington state during the past 20 years — and its accompanying development, pollution and increased demand for water, among other factors — has resulted in a dramatic and well-documented loss of critical wild salmon habitat.

Despite efforts by tribes, state agencies and the federal government to protect freshwater habitat, the long term decline in both the quantity and quality of available wild salmon spawning and rearing habitat continues. The result is wild salmon populations that are smaller and less productive. The National Marine Fisheries Service (NMFS) has proposed to list several stocks of Puget Sound chinook salmon in 1999 as "threatened" under the federal Endangered Species Act (ESA).

Natural forces have also contributed to the decline of wild salmon stocks in the region. The ocean-warming phenomenon know as El Nino has, in recent years, caused drought conditions during the summer months and a reduction in upwelling of cold, nutrient-rich ocean waters, which has contributed to poor ocean survival and growth of young salmon.

A salmon battles its way home. Wild salmon stock recovery is the primary goal of treaty Indian tribes.

Fisheries managers have responded to these conditions with historic cutbacks in fisheries. But depleted stocks cannot be rebuilt by fishery restrictions alone. The habitat these stocks depend on must also be restored.

In 1994 man-made causes (primarily loss and degradation of habitat due to development) combined with natural causes (drought and ocean-warming) to result in record low returns of wild coho and chinook salmon. In response, tribal, state and federal fisheries managers instituted the most restricted fishing seasons ever imposed. Ocean fisheries were closed completely, while those in Puget Sound were reduced to a level never before experienced by tribal, sport and commercial fishermen. Fisheries in every year since, including 1998, were only marginally better. The closures resulted in severe economic hardship for tribal fishermen on reservations, where unemployment runs as high as 80 percent. Non-Indian commercial fishermen, gear suppliers, charter boat operators, tackle manufacturers and associated industries also were hard hit by the closures.

For 1999, fishery managers are again predicting extremely low returns of salmon in many areas, and another round of severe fishing restrictions is expected. Though now waning, strong El Nino events from recent years are expected to once again severely affect returning salmon stocks.

Tribal, state and federal governments and their fisheries managers realize the increased severity of the problems facing wild salmon and the need for a more focused approach in efforts to protect, restore and manage the resource. Several interrelated planning efforts have been initiated to specifically address the problems confronting wild salmon and steelhead populations. It is important to realize that these initiatives are in addition to many ongoing activities of the tribes and Washington Department of Fish and Wildlife (WDFW) — habitat enhancement, water quality

programs and land-use planning reform, regulating fisheries and controlling the spread of fish diseases, for example — that are contributing significantly to the overall effort to improve the condition and management of wild salmon populations and their habitats.

The Wild Stock Restoration Initiative

The tribes and WDFW created the Wild Stock Restoration Initiative (WSRI) in 1991 in response to wild salmon and steelhead stock concerns and the anticipated filing of ESA petitions for many of those populations. The following general approach was established to address wild stock status and recovery:

- Inventory status of stocks and their habitat;
- Review goals and objectives;
- Review management strategies (harvest, habitat and hatcheries);
- Develop recovery and management plans; and
- Monitoring and evaluation.

Salmon And Steelhead Stock Inventory (SASSI)

The first step in the Wild Stock Restoration Initiative — a statewide inventory of all salmon and steelhead stocks and their status — began in the spring of 1992. It took about one year to complete the Salmon and Steelhead Stock Inventory (SASSI), and another 18 months to complete the detailed appendices which provide the data and information used in the evaluation of stock status.

SASSI grouped Washington's 435 salmon and steelhead stocks into five status categories. Of the total, 187 stocks were categorized as healthy; 122 depressed; 12 critical; 113 unknown; and one extinct. SASSI will be periodically updated and revised to reflect changes in stock status gathered through monitoring and evaluation.

While compiling the SASSI document, it became apparent to the tribes and WDFW that it would be impossible to adequately assess salmon and steelhead habitat within the scope of the stock inventory. Because freshwater habitat is a basic limiting factor for the production of some salmon species, it was clear that an inventory of salmon and steelhead habitat must also be compiled.

Salmon And Steelhead Habitat Inventory And Assessment Project (SSHIAP)

Work on the second step in the Wild Stock Restoration Initiative — the Salmon and Steelhead Habitat Inventory and Assessment Project (SSHIAP) — began in 1995.

The SSHIAP project will ultimately result in a blueprint for joint tribal/state cooperative action to document current habitat conditions, assess the role of habitat degradation and loss on the condition of salmon and steelhead stocks, develop stock- or watershed-specific strategies for habitat protection and restoration, and define a cooperative process to implement habitat restoration and protection strategies.

Time Line

Because of the need for quick action to reverse the decline of wild salmon and steelhead stocks, SSHIAP is using existing information. Efforts to update the information will continue throughout the life of the project. The stream segment framework for gathering and analyzing existing habitat information is in place and the database is nearing completion. Work is now centered on filling in the database and developing the Geographic Information System tools for viewing and analyzing this information. Both SASSI and SSHIAP must be viewed as ongoing processes, not one-time efforts. Continued funding support will be necessary beyond the initial effort.

Results

SSHIAP products will include:

- Expanded habitat sections for the SASSI document that describe the location, amount and current condition of habitats used at various stages in the life of salmon and steelhead, historic habitat loss, and the natural and man-made factors contributing to habitat loss and degradation;
- A database that can be queried to provide graphical depictions of types and amounts of habitat lost and degraded, and how this affects salmonid stocks of concern;
- Maps showing critical habitats used by each stock in each stage of its life;
- A habitat protection and restoration strategy for each stock and/or watershed;
- A list identifying future study needs to fill data gaps and improve analysis; and
- A funding strategy to obtain resources necessary to implement habitat protection/ restoration strategies and conduct necessary research.

SSHIAP has been working closely with and providing information for use in the following processes:

- Comprehensive Coho;
- Statewide Limiting Factors Analysis through the Washington Conservation Commission (ESHB 2496);
- Department of Ecology Watershed Characterization Project (HB 2514);
- Timber/Fish/Wildlife Watershed Analysis;
- Salmon restoration planning and prioritization;
- Various tribal processes, including tribal water quality monitoring, ambient monitoring and watershed analysis; and
- Washington Department of Natural Resources Jobs for the Environment project prioritization.

SSHIAP will continue to evolve and grow to meet the needs of salmon restoration in the State of Washington. Reporting will primarily be accomplished through the Internet with web-based maps and database queries.

Comprehensive Coho And Comprehensive Puget Sound Chinook

Tribal and state harvest management is responding to wild stock declines through improved planning processes like Comprehensive Coho and Comprehensive Puget Sound Chinook.

The goal of Comprehensive Coho and Comprehensive Puget Sound Chinook management plans are to restore the productivity, production and diversity of salmon stocks originating in the streams tributary to Puget Sound and the Washington coast to levels that can sustain ceremonial, subsistence, and other fisheries. How? Through the protection, restoration and enhancement of salmon habitat; responsible management of fisheries to ensure that adequate spawning adults escape to use the available habitat; and hatchery programs that provide fishery benefits and enhance the productivity of natural stocks.

The processes are designed to modify the way salmon are managed by moving away from using a fixed number as a harvest target and toward a percentage of the overall run size, known as an exploitation rate, in concert with freshwater habitat improvements and firm hatchery guidelines. This approach has been used for coho management for several Puget Sound stocks during the past three years and fisheries co-

managers are working on applying the process throughout western Washington.

A new Comprehensive Coho fisheries "model," designed to give fisheries managers an accurate reflection of how their management issues are affecting coho stocks, is expected to be completed in the first few months of 1999.

Comprehensive Coho has been in development since 1993, but new efforts to develop a Comprehensive Puget Sound Chinook Management Plan are now on the fast track due to the NMFS proposal to list Puget Sound chinook salmon as "threatened" under ESA in the coming months.

The recognition by Comprehensive Coho and Comprehensive Puget Sound Chinook management plans that harvest, habitat and hatcheries cannot be addressed in isolation is a critical step toward ensuring the health, maintenance and restoration of the productivity, diversity and capacity of all stocks and providing for the optimal utilization of coho and chinook salmon resources.

For example, when long-term problems are rooted primarily in habitat degradation, rather than overfishing, fishing restrictions alone cannot restore depressed stocks to their full productive potential. The key to healthy stocks and sustainable fisheries, therefore, lies in a comprehensive approach that also includes protecting productive habitat and restoring degraded habitat.

Tribal Salmon Recovery Plan

Despite efforts by the tribes to engage the State of Washington in a joint plan to address impending ESA listings, the tribes have been excluded from the state's salmon recovery planning process. Consequently, the tribes are now preparing their own plan. The plan, expected to be unveiled in 1999, will be used by tribes in their watersheds and will provide a framework for incorporating other regional plans. The tribal plan focuses on the management of habitat, harvest and hatcheries, and will serve as a tool for NMFS to create a high standard for habitat protection when it lists salmon species under ESA. It is hoped other agencies and organizations will endorse and/or adopt the plan for implementation.

Regional or watershed initiatives are at the heart of the plan. Specific recovery plans will be developed for each watershed and will guide how fisheries, habitat and hatcheries will be managed.

Wild Stock Restoration And The ESA

Results of the Wild Stock Restoration Initiative — and the many ongoing efforts of the tribes and state to address the decline of wild salmon stocks — will figure prominently in the ESA decision-making process and in finding solutions to saving salmon.

With treaty rights come the responsibility of managing treaty-reserved resources. Although no western Washington salmon stocks have yet been listed under ESA, the tribes already have adjusted treaty-reserved activities because of weak stocks. The tribes are not responsible for the loss of habitat and destructive management practices that have contributed to the decline of salmon species, yet are being asked to shoulder a disproportionate share of the conservation burden.

The tribes generally support ESA, but hold endangered species restoration to a higher standard than the ESA's species-by-species approach to preventing extinction. Tribes believe that resources and the ecosystems on which they depend must be managed in a holistic manner that recognizes all things are connected.

For More Information

For more information about the natural resource management activities of the treaty Indian tribes in western Washington, contact the Northwest Indian Fisheries Commission, 6730 Martin Way E., Olympia, WA 98516; or call (360) 438-1180. The NWIFC home page is available on the World Wide Web at www.nwifc.wa.gov.